Re: question regarding diofantine equations

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- *From*: rob@xxxxxxxxxxxxxx (Rob Johnson)

- *Date*: Tue, 10 Apr 2007 21:26:15 GMT

In article <1176237012.557078.287790@xxxxxxxxxxxxxxxxxxxxxxxxxxx>,
"laura" <laura.brandusan@xxxxxxxxx> wrote:

> I want to solve diofantine equations of form:
>
> ax+by=c,
>
> where a, b and c are real numbers and
>
> x and y are natural numbers (>=0).
>
> Are there any methods for solving this ? I don't want to enumerate all possible pairs (x,y) and to check which ones are good.
>
> Or, is there possible to decide if the equation has solutions without solving it?

The algorithm is called the extended euclidean algorithm, and one implementation is the Euclid−Wallis Algorithm:

<http://www.whim.org/nebula/math/euclid−wallis.html>

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